

AD-A073 188

ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/G 4/2  
19305AT 6SRS MISSILE NUMBER 1040, ROUND NUMBER V-43.(U)  
JUN 79

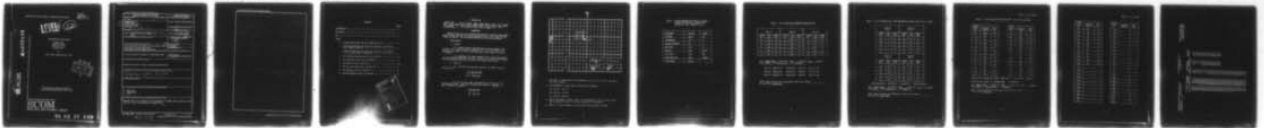
UNCLASSIFIED

ERADCOM/ASL-DR-1034

NL

| OF |

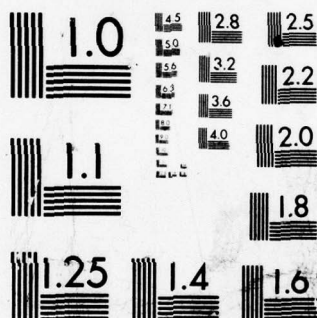
AD  
A073188



END  
DATE  
FILMED

9-79

DDC



MICROCOPY RESOLUTION TEST CHART  
NATIONAL BUREAU OF STANDARDS-1963-A

APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED

DR 1034  
June 1979

AD

**LEVEL**

12 B.S.

AD A 073188

METEOROLOGICAL DATA REPORT

19305AT GSPS  
Missile No. 1040  
Round No. V-43  
26 June 1979

by

White Sands Meteorological Team

DDC  
RECEIVED  
AUG 28 1979  
C

DDC FILE COPY

✓  
ATMOSPHERIC SCIENCES LABORATORY  
WHITE SANDS MISSILE RANGE, NEW MEXICO

**ECOM**

UNITED STATES ARMY ELECTRONICS COMMAND

79 08 27 069

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER DR 1034	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) 19305AT GSRS Missile No. 1040 Round No. V-43		5. TYPE OF REPORT & PERIOD COVERED
7. AUTHOR(s) White Sands Meteorological Team data rept.		6. PERFORMING ORG. REPORT NUMBER (16)
9. PERFORMING ORGANIZATION NAME AND ADDRESS		8. CONTRACT OR GRANT NUMBER(s) DA Task 1T665702D12602
11. CONTROLLING OFFICE NAME AND ADDRESS US Army Electronics Research & Development Comd Atmospheric Sciences Laboratory White Sands Missile Range, New Mexico		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS (12) 29p.
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) US Army Electronics Research & Development Comd		12. REPORT DATE June 1979
		13. NUMBER OF PAGES
		15. SECURITY CLASS. (of this report) UNCLASSIFIED
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report)  Approved for public release; distribution unlimited.		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report) (14) ERADCOM/ASL-DR-2434		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number)  1. Ballistics 2. Meteorology 3. Wind		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number)  Meteorological data gathered for the launching of 19305AT GSRS, Missile No. 1040 Round No. V-43, are presented in tabular form.		

DD FORM 1 JAN 73 1473

EDITION OF 1 NOV 65 IS OBSOLETE

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

410 663





# CONTENTS

	PAGE
INTRODUCTION -----	1
DISCUSSION -----	1
MAP -----	2
TABLES	
1. Surface Observations Taken at 1000 MDT at LC-33 -----	3
2. Anemometer-Measured Wind Speed and Direction, LC-33 Fixed Pole, Taken at 1000 MDT -----	4
3. Anemometer-Measured Wind Speed and Direction, Tower Levels 1, 2, 3, and 4, Taken at 1000 MDT -----	5
4. Pilot-Balloon-Measured Wind Data at 1000 MDT -----	6-7
5. SMR Significant Level Data at 0915 MST -----	8
6. SMR Upper Air Data at 0915 MST -----	9-13
7. SMR MRN Significant Levels at 0915 MST -----	14
8. SMR Mandatory Levels at 0915 MST -----	15
9. SMR MRN Mandatory Levels at 0915 MST -----	16

Accession For		<input checked="" type="checkbox"/>
NTIS GR&I		
DDC TAB		
Unannounced		
Justification		
By		
Distribution		
Availability Code		
Dist	Avail and/or special	
A		

## INTRODUCTION

19305AT GSRS, Missile Number 1040, Round Number B-43, was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 1000 MDT, 26 June 1979. The scheduled launch time was 1000 MDT.

## DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

### 1. Observations

#### a. Surface

(1) Standard surface observations to include pressure, temperature ( $^{\circ}\text{C}$ ), relative humidity, dew point ( $^{\circ}\text{C}$ ), density ( $\text{gm}/\text{m}^3$ ), wind direction and speed, and cloud cover were made at the LC-33 Met Site at T-0 minutes.

(2) Anemometer data were provided from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

#### b. Upper Air

(1) Low level wind data were obtained from RAPTS T-9 pibal observation at:

## SITE AND ALTITUDE

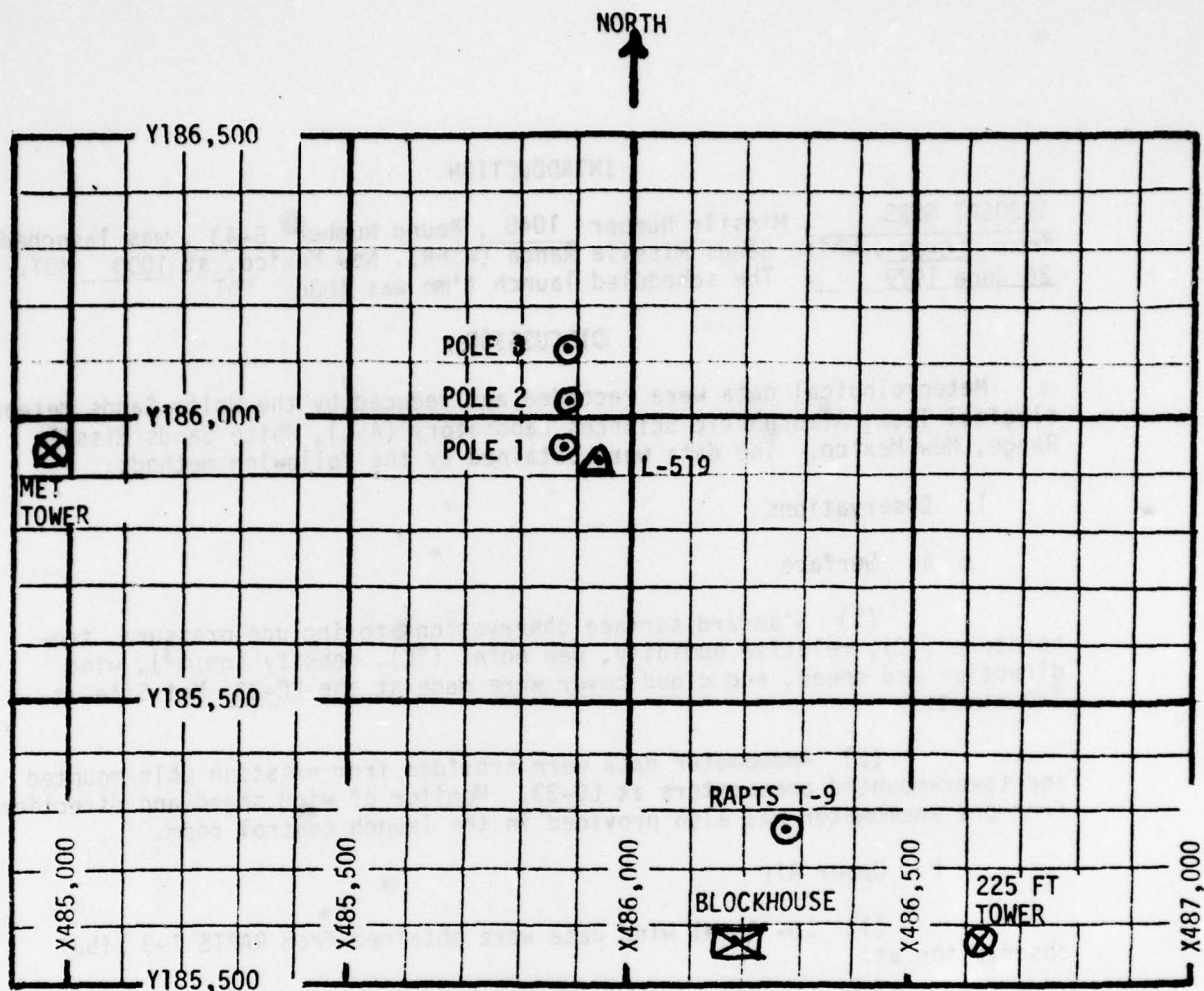
LC-33 1080 meters

(2) Air structure data (rawinsonde) were collected at the following Met Sites. Data were collected from surface to 86,000 feet in 500-foot increments.

## SITE AND TIME

SMR 0915 MST





1. MET TOWER - 4 Bendix Model T-120 Anemometers at 12 ft, 62 ft, 102 ft and 202 ft with E/A recorders.
2. POLE ANEMOMETER - Bendix Model T-120 with E/A recorders.
  - (a) Pole #1 - 38.7 ft
  - (b) Pole #2 - 53.0 ft
  - (c) Pole #3 - 83.6 ft
3. 225 FT WIND TOWER - 5 Bendix Model T-120 Anemometers at 35 ft, 88 ft, 128 ft, 168 ft and 200 ft with 5 X-Y visual indicators in Blockhouse.
4. RAPTS T-9 - Radar Automatic Pilot-Balloon Tracking System T-9 Radar

TABLE 1. SURFACE OBSERVATIONS TAKEN AT 1000 MDT,  
26 JUNE 1979 AT LC-33, 19305AT GSRS,  
MISSILE NO. 1040, ROUND NO. V-43

ELEVATION	3977.30	FT/MSL
PRESSURE	886.8	MBS
TEMPERATURE	27.5	°C
RELATIVE HUMIDITY	38	%
DEW POINT	11.9	°C
DENSITY	1018	GM/M <sup>3</sup>
WIND SPEED	Calm	MPH
WIND DIRECTION	Calm	DEGREES
CLOUD COVER	Clear	



TABLE 2. LC-33 FIXED POLE ANEMOMETER-MEASURED WINDS

POLE #1			POLE #2			POLE #3		
T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH
-30	000	00	-30	000	00	-30	130	05
-20	000	00	-20	000	00	-20	126	04
-10	000	00	-10	000	00	-10	126	03
0.0	000	00	0.0	000	00	0.0	120	02
+10	000	00	+10	000	00	+10	081	02

Type 19305AT GSRS, Missile No. 1040, Round No. Y-43 launched  
from LC-33 on 26 June 1979 at 1000 MDT.

POLE #1 = X485,874.29 Y185,958.90 H4018.74 38.7 ft. AGL

POLE #2 = X485,874.93 Y186,012.00 H4033.57 53.0 ft. AGL

POLE #3 = X485,877.29 Y186,116.06 H4063.92 83.6 ft. AGL

NOTE: Wind directions are referenced to the firing azimuth \_\_\_\_\_  
or true north true north.

TABLE 3. LC-33 METEOROLOGICAL TOWER ANEMOMETER-MEASURED WINDS (202 FT. TOWER)

LEVEL #1 12 ft.			LEVEL #2 62 ft.		
T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH
-30	M	03	-30	177	04
-20	M	02	-20	178	06
-10	M	02	-10	174	04
0.0	M	04	0.0	170	06
+10	M	03	+10	170	05
LEVEL #3 102 ft.			LEVEL #4 202 ft.		
T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH
-30	146	04	-30	172	05
-20	159	04	-20	171	06
-10	156	04	-10	154	05
0.0	163	04	0.0	176	05
+10	163	03	+10	174	05

WTSM Coordinates: X484,982.64 Y185,957.73 H3983.00 (base)

Type 19305AT GSRS, Missile No. 1040, Round No. V-43 launched  
from LC-33 on 26 June 1979 at 1000 MDT.

NOTE: Wind directions are referenced to the firing azimuth \_\_\_\_\_  
or true north true north.

TABLE 4. PILOT-BALLOON-MEASURED WIND DATA (30-METER INCREMENTS)

HEIGHT METERS AGL	DIRECTION DEGREES	SPEED MPH
SFC	Calm	00
30	316	1.0
60	272	1.5
90	228	2.0
120	184	2.5
150	182	4.5
180	179	6.0
210	176	7.5
240	173	9.0
270	168	9.0
300	162	8.5
330	157	8.5
360	151	8.0

HEIGHT METERS AGL	DIRECTION DEGREES	SPEED MPH
390	150	7.5
420	148	7.0
450	146	6.5
480	144	5.5
510	148	6.0
540	151	6.0
570	155	6.0
600	158	6.0
630	156	6.5
660	153	7.0
690	150	7.5
720	147	7.5
750	141	7.5

Release Point Coordinates (WSTM): X486,037.24 Y486,037.24 H3977.30

Released from LC-33 on 26 June 1979 at 1000 MDT.

Type 19305AT GSRS, Missile No. 1040, Round No. V-43 launched  
from LC-33 on 26 June 1979 at 1000 MDT.

NOTE: Wind directions are referenced to the firing azimuth  
or true north true north.



HEIGHT METERS AGL	DIRECTION DEGREES	SPEED MPH
780	135	7.5
810	129	7.5
840	122	7.0
870	125	6.5
900	127	6.0
930	130	5.5
960	132	4.5
990	134	5.5
1020	135	6.0
1050	136	6.5
1080	137	7.0
1110		
1140		
1170		
1200		
1230		
1260		
1290		
1320		
1350		
1380		
1410		

HEIGHT METERS AGL	DIRECTION DEGREES	SPEED MPH
1440		
1470		
1500		
1530		
1560		
1590		
1620		
1650		
1680		
1710		
1740		
1770		
1800		
1830		
1860		
1890		
1920		
1950		
1980		
2010		
2040		
2070		

STATION ALTITUDE 3997.30 FEET MSL  
26 JUNE 79 0915 HRS MST  
ASCENSION NO. 208

SIGNIFICANT LEVEL DATA  
1770060208  
S M R

GEODETIC COORDINATES  
32.48034 LAT DEG  
106.42307 LON DEG

PRESSURE	GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
885.8	3997.3	30.4	33.0
872.4	4442.0	26.4	37.0
850.0	5192.3	23.8	41.0
774.4	7836.6	17.0	52.0
743.2	8986.6	15.5	40.0
700.0	10647.4	12.6	40.0
674.4	11670.8	10.4	29.0
576.0	15903.6	.0	24.0
555.2	16867.4	-2.7	45.0
543.0	17445.5	-4.0	37.0
500.0	19569.2	-8.3	28.0
477.9	20716.8	-11.2	15.0
431.0	23298.1	-16.5	16.0
424.2	23691.0	-17.2	28.0
417.4	24089.7	-17.2	15.0
400.0	25136.9	-18.8	15.0
376.1	26637.5	-22.2	20.0
360.2	27678.0	-24.5	46.0
319.4	30521.3	-31.3	22.0
300.0	31973.2	-34.5	18.0
262.2	35023.4	-42.2	
250.0	36082.0	-43.5	
200.0	40920.6	-53.4	
167.8	44599.9	-58.7	
150.0	46899.4	-62.9	
131.4	49562.4	-66.9	
127.8	50116.8	-66.3	
104.8	54043.2	-70.4	
100.0	54957.6	-72.3	
92.4	56478.1	-76.0	
74.2	60800.7	-62.7	
70.0	61988.3	-62.1	
56.8	66265.7	-61.0	
50.0	68910.7	-56.6	
37.0	75249.5	-54.8	
30.0	79738.9	-49.5	
25.8	83014.8	-48.5	
22.4	86126.1	-43.5	



GEODETIC COORDINATES  
32.48034 LAT DEG  
106.42307 LON DEG

UPPER AIR DATA  
1770060208  
S M R

STATION ALTITUDE 3997.30 FEET MSL  
26 JUNE 79 0915 HRS MST  
ASCENSION NO. 208

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
3997.3	885.8	30.4	12.3	33.0	1010.4	680.8	210.0	6.0	1.000284
4000.0	885.7	30.4	12.3	33.0	1010.3	680.8	209.9	6.0	1.000284
4500.0	870.6	26.2	10.5	37.3	1007.6	675.9	198.1	5.8	1.000278
5000.0	855.7	24.5	10.0	40.0	996.2	673.9	186.0	5.9	1.000275
5500.0	840.8	23.0	9.5	42.3	983.8	672.2	174.5	6.2	1.000271
6000.0	826.2	21.7	9.1	44.4	970.9	670.8	166.8	6.5	1.000267
6500.0	811.7	20.4	8.6	46.4	958.2	669.3	174.7	5.5	1.000263
7000.0	797.6	19.2	8.0	48.5	945.7	667.8	186.4	3.9	1.000259
7500.0	783.6	17.9	7.5	50.6	933.4	666.3	231.2	1.7	1.000254
8000.0	769.9	16.8	6.4	50.3	920.7	664.9	327.4	2.1	1.000249
8500.0	756.2	16.1	4.2	45.1	906.9	664.0	2.0	4.5	1.000240
9000.0	742.8	15.5	2.0	40.0	893.4	663.0	19.2	6.9	1.000231
9500.0	729.6	14.6	1.2	40.0	880.2	662.0	31.5	9.4	1.000227
10000.0	716.5	13.7	.4	40.0	867.2	660.9	33.3	11.7	1.000222
10500.0	703.7	12.9	-.4	40.0	854.4	659.9	32.6	13.8	1.000218
11000.0	691.1	11.8	-2.6	36.2	842.4	658.6	28.9	13.8	1.000211
11500.0	678.6	10.8	-5.7	30.8	830.8	657.2	24.1	13.4	1.000204
12000.0	666.2	9.6	-7.7	28.6	819.2	655.7	23.0	13.3	1.000199
12500.0	653.9	8.4	-9.0	28.0	807.7	654.2	22.5	13.3	1.000194
13000.0	641.8	7.1	-10.4	27.4	795.4	652.8	23.4	14.0	1.000191
13500.0	630.0	5.9	-11.7	26.8	785.3	651.3	24.9	14.6	1.000187
14000.0	618.3	4.7	-13.0	26.2	774.3	649.8	27.8	14.8	1.000183
14500.0	606.9	3.4	-14.4	25.7	763.4	648.3	31.3	15.5	1.000180
15000.0	595.7	2.2	-15.7	25.1	752.8	646.8	35.2	16.7	1.000177
15500.0	584.7	1.0	-17.0	24.5	742.3	645.4	30.9	18.0	1.000173
16000.0	573.9	-.3	-17.4	26.1	731.9	643.9	37.3	19.3	1.000171
16500.0	563.0	-1.7	-14.4	37.0	721.5	642.3	38.2	20.8	1.000171
17000.0	552.4	-3.0	-13.7	43.2	711.3	640.8	39.4	22.5	1.000169
17500.0	541.9	-4.1	-16.7	36.8	700.8	639.4	43.3	23.8	1.000165
18000.0	531.4	-5.1	-18.3	34.7	690.0	638.1	48.2	24.9	1.000161
18500.0	521.2	-6.1	-19.9	32.5	679.4	636.9	50.8	24.3	1.000158
19000.0	511.2	-7.1	-21.6	30.4	668.9	635.6	53.1	23.2	1.000155
19500.0	501.3	-8.2	-23.3	28.3	658.6	634.4	52.9	21.5	1.000152
20000.0	491.6	-9.4	-26.6	23.1	648.9	632.9	53.3	20.1	1.000148
20500.0	482.0	-10.7	-30.6	17.5	639.4	631.3	55.1	19.1	1.000145
21000.0	472.5	-11.8	-33.0	15.1	629.6	629.9	57.0	18.0	1.000142
21500.0	463.2	-12.8	-33.7	15.3	619.6	628.7	59.0	16.9	1.000140
22000.0	454.0	-13.8	-34.5	15.5	609.7	627.4	61.4	15.7	1.000138
22500.0	445.0	-14.9	-35.2	15.7	600.0	626.2	64.2	14.5	1.000135
23000.0	436.2	-15.9	-35.9	15.9	590.5	624.9	66.4	13.2	1.000133

STATION ALTITUDE 3997.30 FEET MSL  
26 JUNE 79 0915 HRS MST  
ASCENSION NO. 208

UPPER AIR DATA  
1770060208  
S M R

GEODETTIC COORDINATES  
32.48034 LAT DEG  
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
23500.0	427.5	-16.9	-33.4	22.2	580.9	623.8	69.0	11.9	1.000131
24000.0	418.9	-17.2	-35.8	17.9	570.0	623.3	71.6	11.6	1.000129
24500.0	410.5	-17.8	-38.1	15.0	560.0	622.6	75.0	11.4	1.000126
25000.0	402.2	-18.6	-38.7	15.0	550.3	621.6	82.1	11.3	1.000124
25500.0	394.1	-19.6	-38.8	16.2	541.4	620.4	88.2	10.9	1.000122
26000.0	386.1	-20.8	-38.8	17.9	532.8	619.0	91.1	9.1	1.000120
26500.0	378.2	-21.9	-38.9	19.5	524.3	617.6	94.2	7.3	1.000118
27000.0	370.5	-23.0	-36.0	29.1	515.8	616.2	94.7	5.5	1.000117
27500.0	362.9	-24.1	-33.4	41.6	507.4	614.9	92.9	3.7	1.000115
28000.0	355.3	-25.3	-34.1	43.3	499.2	613.5	72.3	2.2	1.000113
28500.0	347.9	-26.5	-36.2	39.1	491.2	612.0	20.0	2.1	1.000111
29000.0	340.6	-27.7	-38.4	34.8	483.2	610.5	1.6	5.0	1.000109
29500.0	333.5	-28.9	-40.7	30.6	475.5	609.0	2.6	7.7	1.000107
30000.0	326.5	-30.1	-43.1	26.4	467.8	607.5	17.1	10.0	1.000105
30500.0	319.7	-31.2	-45.8	22.2	460.3	606.0	32.7	11.9	1.000103
31000.0	312.9	-32.4	-47.3	20.7	452.6	604.6	32.7	12.1	1.000101
31500.0	306.2	-33.5	-48.9	19.3	445.0	603.2	38.2	11.6	1.000100
32000.0	299.6	-34.6	-50.5	17.8**	437.5	601.8	42.0	9.4	1.000098
32500.0	293.1	-35.8	-53.1	14.9**	430.2	600.2	50.0	7.2	1.000096
33000.0	286.7	-37.1	-55.9	11.9**	423.1	598.6	70.7	5.2	1.000094
33500.0	280.4	-38.4	-59.2	9.0**	416.1	597.0	102.6	4.4	1.000093
34000.0	274.3	-39.6	-63.2	6.0**	409.2	595.4	132.9	4.5	1.000091
34500.0	268.3	-40.9	-68.9	3.1**	402.4	593.7	155.7	5.4	1.000090
35000.0	262.5	-42.1	-88.7	.1**	395.8	592.1	173.6	5.6	1.000088
35500.0	256.6	-42.8			388.1	591.3	187.7	5.9	1.000086
36000.0	250.9	-43.4			380.5	590.5	194.4	4.6	1.000085
36500.0	245.2	-44.4			373.4	589.3	209.3	3.5	1.000083
37000.0	239.6	-45.4			366.5	588.0	247.6	3.5	1.000082
37500.0	234.2	-46.4			359.8	586.6	268.6	4.8	1.000080
38000.0	228.8	-47.4			353.2	585.3	259.4	6.8	1.000079
38500.0	223.6	-48.4			346.7	584.0	254.3	8.9	1.000077
39000.0	218.5	-49.5			340.3	582.7	246.8	10.4	1.000076
39500.0	213.5	-50.5			334.1	581.3	241.4	12.1	1.000074
40000.0	208.7	-51.5			328.0	580.0	245.7	14.0	1.000073
40500.0	203.9	-52.5			322.0	578.6	249.6	15.9	1.000072
41000.0	199.2	-53.5			316.0	577.4	254.4	16.0	1.000070
41500.0	194.5	-54.2			309.6	576.4	259.6	15.7	1.000069
42000.0	190.0	-55.0			303.3	575.5	265.3	13.5	1.000068
42500.0	185.5	-55.7			297.1	574.5	274.0	10.7	1.000066
43000.0	181.1	-56.4			291.1	573.6	267.8	7.8	1.000065

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

GEODETIC COORDINATES  
32.48034 LAT DEG  
106.42307 LON DEG

UPPER AIR DATA  
1770060208  
S M R

STATION ALTITUDE 3997.30 FEET MSL  
25 JUNE 79 0915 HRS MST  
ASCENSION NO. 208

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
43500.0	176.8	-57.1		285.2	572.6	242.4	5.6	1.000064
44000.0	172.7	-57.8		279.4	571.7	214.5	7.4	1.000062
44500.0	168.6	-58.6		273.7	570.7	202.9	10.9	1.000061
45000.0	164.6	-59.4		268.2	569.5	199.1	13.9	1.000060
45500.0	160.6	-60.3		262.9	568.3	200.6	15.2	1.000059
46000.0	156.7	-61.3		257.7	567.1	201.8	16.6	1.000057
46500.0	153.0	-62.2		252.5	565.9	196.9	16.1	1.000056
47000.0	149.3	-63.1		247.5	564.7	191.5	15.7	1.000055
47500.0	145.6	-63.8		242.3	563.7	188.3	15.5	1.000054
48000.0	142.0	-64.6		237.2	562.7	187.8	15.4	1.000053
48500.0	138.5	-65.3		232.2	561.7	187.3	15.3	1.000052
49000.0	135.1	-66.1		227.3	560.6	186.3	16.4	1.000051
49500.0	131.8	-66.8		222.5	559.6	185.4	17.6	1.000050
50000.0	128.6	-66.4		216.6	560.1	182.4	19.1	1.000048
50500.0	125.3	-66.7		211.5	559.8	179.0	20.8	1.000047
51000.0	122.2	-67.2		206.8	559.1	175.7	21.4	1.000046
51500.0	119.2	-67.7		202.1	558.3	171.4	19.8	1.000045
52000.0	116.2	-68.3		197.6	557.6	166.3	18.4	1.000044
52500.0	113.3	-68.8		193.1	556.9	167.2	15.5	1.000043
53000.0	110.5	-69.3		188.8	556.2	169.4	12.5	1.000042
53500.0	107.7	-69.8		184.6	555.5	176.4	9.7	1.000041
54000.0	105.0	-70.4		180.4	554.8	194.0	7.8	1.000040
54500.0	102.4	-71.3		176.7	553.4	218.8	7.0	1.000039
55000.0	99.8	-72.4		173.2	552.0	228.3	5.2	1.000039
55500.0	97.2	-73.6		169.7	550.3	243.7	3.3	1.000038
56000.0	94.7	-74.8		165.4	548.6	270.1	1.9	1.000037
56500.0	92.5	-75.9		163.0	547.1	317.6	.6	1.000036
57000.0	90.0	-74.4		157.7	549.2	53.5	1.4	1.000035
57500.0	87.7	-72.9		152.6	551.4	71.9	.8	1.000034
58000.0	85.5	-71.3		147.6	553.5	200.3	.7	1.000033
58500.0	83.4	-69.8		142.8	555.6	213.6	1.5	1.000032
59000.0	81.3	-68.2		138.2	557.7	202.3	1.1	1.000031
59500.0	79.3	-66.7		133.7	559.8	180.5	.8	1.000030
60000.0	77.3	-65.2		129.4	561.8	85.8	4.1	1.000029
60500.0	75.3	-63.6		125.3	563.9	79.9	8.9	1.000028
61000.0	73.5	-62.6		121.6	565.3	64.3	12.4	1.000027
61500.0	71.7	-62.3		118.5	565.8	96.1	14.0	1.000026
62000.0	70.0	-62.1		115.5	566.0	105.2	16.1	1.000026
62500.0	68.5	-62.0		112.6	566.1	111.6	15.8	1.000025
63000.0	66.6	-61.8		109.8	566.3	118.2	15.1	1.000024



STATION ALTITUDE 3997.30 FEET MSL  
26 JUNE 79 0915 HRS MST  
ASCENSION NO. 208

UPPER AIR DATA  
1770060208  
S M R

GEODETIC COORDINATES  
32.48034 LAT DEG  
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
63500.0	65.0	-61.7		107.1	566.5	119.9	14.5	1.000024
64000.0	63.4	-61.6		104.5	566.7	107.0	13.8	1.000023
64500.0	61.9	-61.5		101.9	566.8	93.6	13.9	1.000023
65000.0	60.4	-61.3		99.4	567.0	85.0	15.0	1.000022
65500.0	59.0	-61.2		96.9	567.2	79.3	16.6	1.000022
66000.0	57.5	-61.1		94.5	567.3	75.2	18.1	1.000021
66500.0	56.2	-60.6		92.1	568.0	77.7	18.5	1.000021
67000.0	54.8	-59.8		89.5	569.1	80.0	18.9	1.000020
67500.0	53.5	-58.9		87.0	570.2	81.7	19.5	1.000019
68000.0	52.2	-58.1		84.6	571.3	82.2	20.1	1.000019
68500.0	51.0	-57.3		82.3	572.4	82.7	20.8	1.000018
69000.0	49.8	-56.6		80.1	573.3	83.5	21.4	1.000018
69500.0	48.6	-56.4		78.2	573.5	84.6	21.9	1.000017
70000.0	47.5	-56.3		76.3	573.7	85.8	22.5	1.000017
70500.0	46.4	-56.1		74.4	573.9	90.1	23.1	1.000017
71000.0	45.3	-56.0		72.6	574.1	95.2	23.9	1.000016
71500.0	44.2	-55.9		70.9	574.3	99.9	24.8	1.000016
72000.0	43.2	-55.7		69.2	574.5	100.0	25.1	1.000015
72500.0	42.2	-55.6		67.5	574.6	99.8	25.3	1.000015
73000.0	41.2	-55.4		65.9	574.8	99.5	25.6	1.000015
73500.0	40.2	-55.3		64.3	575.0	99.9	24.2	1.000014
74000.0	39.3	-55.2		62.7	575.2	100.3	22.6	1.000014
74500.0	38.3	-55.0		61.2	575.4	100.8	21.1	1.000014
75000.0	37.4	-54.9		59.8	575.6	101.2	21.0	1.000013
75500.0	36.6	-54.5		58.3	576.1	101.8	20.9	1.000013
76000.0	35.7	-53.9		56.8	576.8	102.0	20.9	1.000013
76500.0	34.9	-53.3		55.3	577.6	100.4	21.9	1.000012
77000.0	34.1	-52.7		53.9	578.4	98.8	22.9	1.000012
77500.0	33.3	-52.1		52.5	579.2	97.4	24.0	1.000012
78000.0	32.5	-51.6		51.2	579.9	98.8	24.0	1.000011
78500.0	31.8	-51.0		49.8	580.7	100.5	24.0	1.000011
79000.0	31.1	-50.4		48.6	581.5	102.2	24.0	1.000011
79500.0	30.3	-49.8		47.3	582.2	105.3	23.5	1.000011
80000.0	29.6	-49.4		46.2	582.7	103.7	22.9	1.000010
80500.0	29.0	-49.3		45.1	582.9	112.2	22.5	1.000010
81000.0	28.3	-49.1		44.0	583.1	112.1	22.3	1.000010
81500.0	27.7	-49.0		43.0	583.3	111.2	22.0	1.000010
82000.0	27.0	-48.8		42.0	583.5	110.3	21.8	1.000009
82500.0	26.4	-48.7		41.0	583.7	106.7	21.8	1.000009
83000.0	25.8	-48.5		40.0	583.9	102.3	22.0	1.000009

STATION ALTITUDE 3997.30 FEET MSL  
 25 JUNE 79 0915 HRS MST  
 ASCENSION NO. 208

UPPER AIR DATA  
 1770060208  
 S M R

GEODETIC COORDINATES  
 32.48034 LAT DEG  
 106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
83500.0	25.2	-47.7		39.0	584.9	98.0	22.3	1.000009
84000.0	24.7	-46.9		38.0	586.0			1.000008
84500.0	24.1	-46.1		37.0	587.0			1.000008
85000.0	23.6	-45.3		36.0	588.0			1.000008
85500.0	23.0	-44.5		35.1	589.1			1.000008
86000.0	22.5	-43.7		34.2	590.1			1.000008



STATION ALTITUDE 3997.30 FEET MSL  
 25 JUNE 79 0915 HRS MST  
 ASCENSION NO. 208

MRN SIGNIFICANT LEVEL DATA  
 1770060208  
 S M R

GEODETIC COORDINATES  
 32.48034 LAT DEG  
 106.42307 LON DEG

GEOPOTENTIAL ALTITUDE DECA METERS	DIRECTION DEG (TN)	WIND DATA		E-W MPS	DEW PT DEG C	TEMPERATURE		PRESSURE MILLIBARS
		SPEED MPS	N-S MPS			AIR DEG C		
2613.	9999.**	9999.**	-9999.**	-9999.**	99	-43.5	2.240+1	
2519.	102.	11.	2.	-11.	99	-48.5	2.580+1	
2420.	107.	12.	3.	-11.	99	-49.5	3.000+1	
2284.	101.	11.	2.	-11.	99	-54.8	3.700+1	
2092.	83.	11.	-1.	-11.	99	-56.6	5.000+1	
2012.	77.	9.	-2.	-9.	99	-61.0	5.680+1	
1883.	105.	8.	2.	-8.	99	-62.1	7.000+1	
1847.	79.	6.	-1.	-6.	99	-62.7	7.420+1	
1716.	311.	0.	-0.	0.	99	-76.0	9.240+1	
1670.	228.	3.	2.	2.	99	-72.3	1.000+2	

\*\* WIND DATA NOT COMPUTED DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

STATION ALTITUDE 3997.30 FEET MSL  
26 JUNE 79 0915 HRS MST  
ASCENSION NO. 208

MANDATORY LEVELS  
1770060208  
S M R

GEODETIC COORDINATES  
32.48034 LAT DEG  
106.42307 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.	WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	5189.	23.8	9.8	41.	181.5	6.0
800.0	6915.	19.4	8.1	48.	183.9	4.4
750.0	8725.	15.8	3.2	43.	8.2	5.7
700.0	10637.	12.6	-6	40.	32.2	14.2
650.0	12660.	8.0	-9.5	28.	22.8	13.5
600.0	14806.	2.7	-15.2	25.	33.9	16.2
550.0	17090.	-3.3	-14.4	42.	39.6	22.9
500.0	19541.	-8.3	-23.5	28.	52.9	21.3
450.0	22192.	-14.3	-34.8	16.	62.6	15.2
400.0	25094.	-18.8	-38.9	15.	83.9	11.3
350.0	28312.	-26.1	-35.6	40.	37.6	1.6
300.0	31909.	-34.5	-50.4	18.	41.6	9.6
250.0	36002.	-43.5			195.5	4.4
200.0	40820.	-53.4			253.4	16.1
175.0	43614.	-57.4			227.9	5.6
150.0	46771.	-62.9			192.8	15.8
125.0	50412.	-66.8			178.8	20.9
100.0	54786.	-72.3			227.1	5.5
80.0	59088.	-67.3			193.0	.9
70.0	61774.	-62.1			104.6	15.9
60.0	64907.	-61.3			83.7	15.4
50.0	68550.	-56.6			83.2	21.2
40.0	73308.	-55.3			99.9	24.0
30.0	79396.	-49.5			106.6	23.2
25.0	83327.	-47.4				

STATION ALTITUDE 3997.30 FEET MSL  
 26 JUNE 79 0915 HRS MST  
 ASCENSION NO. 208

MRN MANDATORY LEVELS  
 1770060208  
 S M R

GEODETIC COORDINATES  
 32.48034 LAT DEG  
 106.42307 LON DEG

GEOPOTENTIAL ALTITUDE DECAMETERS	DIRECTION DEG (TN)	SPEED MPS	WIND DATA		E-W MPS	DEW PT DEP DEG C	TEMPERATURE		PRESSURE MILLIBARS
			N-S MPS	-9999.**			AIR DEG C		
2540.	9999.**	9999.**	-9999.**	-9999.**	-9999.**	99	-47.4	2.500+1	
2420.	107.	12.	3.	-11.	-11.	99	-49.5	3.000+1	
2234.	100.	12.	2.	-12.	-12.	99	-55.3	4.000+1	
2092.	83.	11.	-1.	-11.	-11.	99	-56.6	5.000+1	
1978.	84.	8.	-1.	-8.	-8.	99	-61.3	6.000+1	
1883.	105.	8.	2.	-8.	-8.	99	-62.1	7.000+1	
1801.	193.	0.	0.	0.	0.	99	-67.3	8.000+1	
1670.	227.	3.	2.	2.	2.	99	-72.3	1.000+2	
1537.	179.	11.	11.	-0.	-0.	99	-66.8	1.250+2	
1426.	193.	8.	8.	2.	2.	99	-62.9	1.500+2	
1329.	228.	3.	2.	2.	2.	99	-57.4	1.750+2	
1244.	253.	8.	2.	8.	8.	99	-53.4	2.000+2	
1097.	195.	2.	2.	1.	1.	99	-43.5	2.500+2	
973.	42.	5.	-4.	-3.	-3.	16	-34.5	3.000+2	
863.	38.	1.	-1.	-1.	-1.	09	-26.1	3.500+2	
765.	84.	6.	-1.	-6.	-6.	20	-18.8	4.000+2	
676.	63.	8.	-4.	-7.	-7.	20	-14.3	4.500+2	
596.	53.	11.	-7.	-9.	-9.	15	-8.3	5.000+2	
521.	40.	12.	-9.	-8.	-8.	11	-3.3	5.500+2	
451.	34.	8.	-7.	-5.	-5.	18	2.7	6.000+2	
366.	23.	7.	-6.	-3.	-3.	17	8.0	6.500+2	
324.	32.	3.	-6.	-4.	-4.	13	12.6	7.000+2	
260.	8.	3.	-3.	-0.	-0.	13	15.8	7.500+2	
211.	184.	2.	2.	0.	0.	11	19.4	8.000+2	
156.	181.	3.	3.	0.	0.	14	23.8	8.500+2	

\*\* WIND DATA NOT COMPUTED DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.